

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of)

Computer III Further Remand)

Proceedings: Bell Operating)

Company Provision of Enhanced)
Services)

CC Docket No. 95-20

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APR - 7 1995

COMMENTS OF AMERITECH

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

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I. INTRODUCTION AND SUMMARY

Ameritech respectfully submits these Comments in response to the Notice of Proposed Rule Making¹ issued by the Federal Communications Commission ("Commission") in the above-captioned matter. In light of the recent remand by the U.S. Court of Appeals for the Ninth Circuit, the Commission asks, once again, whether it should "totally lift (its) structural separation requirements, as applied to BOC provision of enhanced services."²

The debate over the rules for BOC provision of enhanced services has continued for nearly three decades.³ As noted by the Commission, the debate on CI-III alone has been going on for nearly 10 years.⁴ Rules have been set,

1 In the Matter of Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services, CC Docket No. 95-20, Notice of Proposed Rulemaking, released February 21, 1995 (hereinafter "NPRM").

2 NPRM, at 3 (¶ 2).

3 It was November 9, 1966 when the Commission first noted that "the growing convergence of computers and communications has given rise to a number of regulatory and policy questions within the perimeter of the Communications Act." In the Matter of Regulatory and Policy Problems Presented by the Interdependence of Computer And Communication Services and Facilities, Docket No. 16979 ("Computer I"), Notice of Inquiry, adopted November 9, 1966, 7 FCC 2d 11 (¶ 2).

4 NPRM, at 5 (¶ 5).

then overturned, reset, and overturned again, and fashioned into temporary rules and then into seemingly permanent rules.

In all this time, the essence of the issues in this proceeding have remained unchanged. The questions remain (1) how much of a handicap the BOCs should have versus the rest of the industry, and (2) whether asymmetrical rules should prevent BOCs from jointly marketing enhanced services with basic services, while other providers are not restricted.

As before, unrestricted competitors will argue that structural separation should be reimposed because the BOCs could theoretically discriminate between their own service and those of others. However, real experience with non-structural safeguards has proven that this worry is unfounded. The Commission's rules have been effective, and the discrimination complaints warned of have not been filed. The real issue is whether it is wise to reimpose a handicap on BOCs to prevent abuses which have not occurred. Ameritech believes customers are better served by having fewer artificial restrictions for all providers.

Throughout the 30-year period during which the industry rules have been uncertain, the industry has changed significantly. When the inquiry was begun, there was only one local exchange carrier in any given territory. The regulatory paradigm was geared to a monopoly environment involving access to customers solely via the Public Switched Telephone Network ("PSTN"). This fundamental assumption of the old CI-III regulatory model is obsolete. Due to the competitive nature of today's telecommunications

marketplace, as well as the impact of technological advancement, a customer's choice of channels available for delivery of information services is extremely diverse. Imposition of a structural separation handicap on only one of the competing providers does not fit with the "network of networks" environment of the mid-1990s and beyond.

As detailed in these Comments, Ameritech urges the Commission not to return to the old paradigm which was developed in a monopoly environment. The rules governing competition in today's "network of networks," must be symmetrical and encourage providers to meet customers' increasingly sophisticated needs for information services.

II. THE ENHANCED SERVICES MARKETPLACE HAS GROWN UNDER THE COMMISSION'S NON-STRUCTURAL APPROACH

As the Commission had hoped to achieve, the enhanced services industry has grown in both depth and breadth since the Commission lifted its structural separation requirements. The U.S. marketplace now produces total annual revenues estimated to exceed \$3 billion.⁵ Annual growth rates for some individual enhanced service offerings currently exceed 30%,⁶ due in part to the rich array of network functionality which is now available to enhanced service providers ("ESPs") from the BOCs. Since the BOCs' ONA

⁵ In its recent report titled U.S. Industrial Outlook 1994 (hereinafter "Outlook"), (p. 29-7), the U.S. Department of Commerce reported estimates of total revenues for the U.S. enhanced services market at \$3 billion in 1992, and \$ 3.4 billion in 1993.

⁶ For example, Ameritech has estimated the current annual U.S. growth rates for various forms of voicemail service -- a service which involves relatively mature technologies -- at levels ranging from 20% to 34%.

plans were approved by the Commission, over 150 ONA services have been made available.⁷

It should also be remembered that enhanced services providers do not truly represent an isolated market segment in and of themselves. Rather, they should be viewed as entities which provide a variety of services and products within a much broader and larger information industry. The expanding market for on-line information services (estimated to exceed \$9 billion annually, and growing at \$1 Billion per year)⁸ is but one example of this secondary market effect.

However, the Commission's non-structural approach as implemented has actually tended to stifle the growth of enhanced services. Some of the measures imposed on the BOCs have created significant disincentives for fuller BOC participation in the developing marketplace. The safeguards have, in effect, gone too far by restricting full BOC participation instead of merely protecting against potential misconduct. The time has come to reexamine the stringent measures imposed upon the BOCs to determine whether they are needed at all, and if so, how they can best be modified to provide additional incentives for BOC participation in the enhanced services marketplace.

⁷ NPRM, at 15 (¶ 19).

⁸ U.S. Industrial Outlook 1991, p. 27-2.

III. INDUSTRY TRENDS HAVE OBLITERATED THE BASIS FOR STRUCTURAL SEPARATION

A critical assumption in the Commission's CI-II and CI-III decisions was that the BOCs' networks were an alleged "bottleneck" through which information services had to pass in order to reach the consumer. The existence of safeguards arguably guards against an abuse of such a situation. The major debate was over the appropriate level of safeguards, given their relative costs and benefits. Industry trends, however, have since made that assumption obsolete.

BOC networks cannot possibly represent such a "bottleneck" any longer (if they ever did), for two different but related reasons. First, customer access to the PSTN is now available through a variety of sources. Two important factors in this regard are the proliferation of competitive access providers ("CAPS") -- largely in response to the Commission's interconnection orders -- and the movement in certain state jurisdictions to facilitate the competitive provision of local exchange services. Both of these factors give customers and enhanced service providers alternative methods of reaching each other via the PSTN.

Second, and perhaps more importantly, the phenomenon of "convergence" is rapidly accelerating which necessitates a broad reassessment of the fundamental foundation underlying the Commission's CI-II and CI-III decisions; i.e., that the development and availability of a wealth of new

a distribution vehicle. To put it in layman's terms:

"What convergence means is that your T.V., telephone and computer will soon become one. You will be able to watch your favorite programs, order pay-per-view movies, buy groceries, phone or write a friend overseas, pay your taxes and do countless other tasks -- all on the same box."⁹

In other words, the change in technology has blurred the distinctions between the communications, information, and entertainment industries.

What this means to the present inquiry is that existing and future information service suppliers and their customers will be able to choose among a widening variety of distribution which for enhanced services, including coaxial cable, radio spectrum, fiber optics, satellite, CD-ROM, LANs/WANs and the PSTN.

A concisely-stated explanation of the dynamics of convergence has been put forth by Dr. Joseph S. Kraemer:

"In order to understand convergence, one must understand the evolving restructuring of the communications, information, and entertainment industries in the United States. ...[T]he information and entertainment "content" (the supply) must be distributed to users/customers/subscribers (the demand). Over the course of the 1990s, there will be a perceptible and growing shift from physical (i.e., movement of goods) to electronic (i.e., movement of digital data). Likewise, substantial revenues and profits are also shifting.

The total 1994 estimated revenues of the components of the value chain approach \$1 trillion.¹⁰

It is critically important to understand that in this model, LEC is only one channel (although a ubiquitous one in its franchise areas) of local distribution to end users. *Given the technologies*

⁹ Untangling the Web, Chicago Tribune, April 3, 1995 (p. B4).

¹⁰ The Realities of Convergence, Dr. J.S. Kraemer, Managing Director, Communications & Electronics Industries Consulting, EDS Management Consulting Services, 1994.

available currently and in the near future, the existence of aggressive competitors entering the local distribution market, and the fact that users will demand control over what is received and when, no single LEC has the market power to block access or command above-market prices over the long run. (Emphasis in original.)

. . . Any single LEC (or holding company of LECs) is relatively small when compared to the entertainment and information industries, which are demanding increasing electronic access to end users."¹¹

Given the availability, and more importantly, the rapid public acceptance of these alternative distribution vehicles for enhanced services -- and the likelihood that the popularity of these alternative vehicles will continue to increase -- it is clear that any assumption that the BOCs can somehow leverage their control of the PSTN as a distribution vehicle in order to favor their own enhanced services operations is flawed. To the extent that BOCs would discriminate, and thus make their networks less accommodating to ESPs, the BOCs would just drive valuable usage off their networks. Rather, the BOCs' incentive is to effectively and economically serve their ESP customers so that they continue to send their traffic over the PSTN. Thus, the benefits to be realized by maintaining strong safeguards against inappropriate BOC action (and conversely the potential cost associated with loosening those restrictions) are now virtually non-existent, and must be balanced against the potentially significant costs in terms of inefficiency and consumer inconvenience that would accompany the imposition of

¹¹ Local Competition: An Update on the War of All Against All,

Dr. J.S. Kraemer, Managing Director, Communications & Electronics Industries Consulting, EDS Management Consulting Services, 1994.

unnecessary regulatory restrictions.

IV. THE BOCS HAVE NOT DOMINATED THE MARKETPLACE

During the development of the U.S. enhanced services industry, the growth of the overall marketplace has outstripped, rather than been dominated by, the presence of the BOCs. Despite earlier protests about the chance that they would dominate the then-infant enhanced services business, the BOCs' combined presence -- in a domestic enhanced services marketplace of over \$3 billion -- has been estimated at approximately \$400 million, or less than 20% of the U.S. enhanced services industry's estimated annual revenues.

These facts are not particularly surprising, given the size and resources of many of the BOCs' actual and potential competitors in this field. Well-funded, world class companies in the banking, computer, financial services, and telecommunications industries have entered the enhanced services marketplace with few regulatory constraints, offering voicemail, message delivery, facsimile and other services in markets across the country, often providing a full range of services from a single, integrated technology platform.

The nature and resources of the BOCs' potential competitors was discussed by the Federal Court of Appeals for the D.C. Circuit in its decision which lifted the MFJ's information services restriction. In considering the low likelihood that the BOCs could exercise market power in the information services marketplace, the court observed:

"(i)t is worth noting here the character of some of the firms that the BOCs would have to drive out. They include GE (with annual revenues about five times those of a BOC), AT&T itself (revenues three times those of a BOC), IBM and Sears with their Prodigy service, Merrill-Lynch, ITT, Mead Corporation, American Express, Citicorp, Chase Manhattan Bank, and a variety of foreign and independent telephone companies These companies are not pushovers."¹²

On the other hand, the combined effects of the Commission's safeguard, combined with other constraints (e.g., the interLATA prohibition imposed by the Modified Final Judgment) prevent the BOCs from offering customers integrated offerings and "one-stop shopping" capabilities they strongly prefer.¹³ The BOCs are, of course, further hampered by limited pricing flexibility, as well as the inefficiencies caused by the structural separation requirements and other safeguards. It is obvious that experience has put to rest earlier fears of BOC marketplace dominance.

V. NON-STRUCTURAL SAFEGUARDS HAVE BEEN EFFECTIVE

The adoption of non-structural safeguards against potential BOC misconduct did not cease with the Commission's initial CI-III actions. In fact, the Commission's continuing activities in implementing its Open Network Architecture ("ONA") policies have deployed a further array of safeguards against any potential discriminatory conduct by the BOCs. Since the Phase I Order in the CI-III proceeding, access discrimination (i.e., favoring a BOC-

¹² U.S. v. Western Electric Company, 993 F.2d 1572, 1581-2 (D.C. Cir. 1993)

("Information Services Appeal").

¹³ The competitive disadvantage that a return to structural separation would impose (due to the BOC's loss of authority to offer both basic and enhanced services via joint marketing) is discussed in the attached Affidavit of David J. Teece

affiliated ESP over a non-affiliate in access to the network connections and services which underlie an enhanced service offering) has been effectively prevented by a wide variety of measures.

These safeguards include:

(1) Comparably Efficient Interconnection ("CEI") requirements, which require BOCs to define and comply with a series of parameters insuring equal access by competing ESPs to a variety of underlying network characteristics. Such parameters cover interface functionality, unbundling and resale of basic services, technical characteristics, installation and maintenance reporting, end-user access, minimization of ESP transport costs, and availability to all interested ESPs;

(2) Network unbundling requirements under ONA, which require BOCs to provide requested new network services to competing ESPs in a standard manner, and to base their decisions to deploy new services on criteria which include variations among BOC equipment, relative costs, and services requested by ESPs (through the IILC) in the BOCs' geographic service areas;

(3) Customer Proprietary Network Information ("CPNI") rules, which prevent the BOCs from using their access to information (regarding local exchange customer usage patterns and levels) to their competitive advantage in the unregulated enhanced services marketplace;

(4) Network disclosure requirements, which ensure that non-BOC-

affiliated ESPs receive timely access to technical information related to new network interconnection arrangements; and

(5) Non-discrimination reporting requirements, which compare the quality of basic network services provided to the BOCs' own enhanced services with those provided to non-affiliated ESPs. Associated measurements cover both installation and repair intervals.

Additional safeguards put in place by the Commission in other contexts also apply to BOC provision of enhanced services. For example, the Part 64 joint cost accounting rules, which apply generally to any costs shared between regulated and non-regulated activities, apply with full force and effect to the provision of enhanced services by the BOCs and their affiliates. Similarly, the Commission's comprehensive system of price cap regulation removes any alleged underlying incentives for the BOCs to cross-subsidize between regulated and unregulated services. Since the price cap does not change in response to a regulated carrier's cost changes, cost shifting from nonregulated to regulated activities is completely unavailing since such behavior cannot result in an increase in the permitted price levels.¹⁴

It cannot be credibly argued that this array of non-structural safeguards has been ineffective. In the first place, it is undisputed that, since the structural separation requirement was lifted, no formal FCC complaint has been filed by any party alleging access discrimination by Ameritech or any

¹⁴ Ameritech is also subject to price cap regulation on a state level in all five jurisdictions covering the areas which Ameritech serves.

other BOC against a non-affiliated ESP.¹⁵ Given the growth of the enhanced services industry, this is nothing short of a remarkable record of cooperation between the BOCs and the ESPs who do, after all, represent both the BOCs' customers and their competitors.

It practically goes without saying that ESPs would have complained loudly to the Commission if discrimination of any kind were reflected in any of the reports that flow to and through state and federal regulators under the nondiscrimination requirements discussed above. As noted by the Court in the Information Services Appeal:

“[M]oreover, information services giants operating through the country, such as IBM, AT&T and GE, will notice any discrepancies in treatment by the various BOCs and will have the capacity and incentive to bring anticompetitive conduct to the attention of regulatory agencies.”¹⁶

It is also undisputed that no ESP has ever petitioned the FCC for redress of a refusal, by Ameritech or any other BOC, to provide a requested new basic service element.¹⁷ To the contrary, ESPs can now choose, on a nondiscriminatory, tariffed basis from over 150 ONA network services to design and provide new enhanced services to their customers.¹⁸

As if to underscore the near-complete absence of misconduct, the Ninth Circuit's remand decision itself discusses only a single instance of alleged anticompetitive conduct by a single BOC in a single state

¹⁵ NPRM, at 20 (¶ 29).

¹⁶ U.S. v. Western Electric Company, 993 F. 2d 1572, 1580 (D.C. Cir. 1993).

¹⁷ NPRM, at 16 (¶ 21).

¹⁸ *Ibid.*, at 15 (¶ 19).

jurisdiction.¹⁹ Furthermore, the court therein sustained the CPNI rules, the only one of the Commission's many non-structural safeguards that was attacked on appeal.²⁰

Thus, although some parties still voice unsupported complaints about an alleged potential for anticompetitive behavior, the Commission's nonstructural safeguards have obviously proven quite effective in real terms.

VI. UNBUNDLING PROCEEDS APACE IN THE CONTEXT OF OTHER REGULATORY INITIATIVES

Since the Commission's implementation of its non-structural safeguards approach, a wide spectrum of new pro-competitive developments have driven the unbundling of the PSTN. State regulators' embrace of a competitive local exchange business model is an undeniable trend with which Ameritech is particularly familiar. Loop/switch unbundling has already been ordered by the Illinois and Michigan Commissions, and petitions for state certification of alternate local exchange carriers have been granted by both states as well.²¹ The Commission itself has already ordered the unbundling of switched transport in its Expanded Interconnection

¹⁹ California v. FCC, 39 F. 3d 919, 929 (9th Cir. 1994) (hereinafter "Remand"). It is noteworthy that even that instance, the so-called "MemoryCall" case, did not result in an FCC complaint; indeed, the service in question had been provided under an FCC-approved CEI plan, which was upheld on appeal as a valid FCC preemption of state PUC authority; Georgia PSC v. FCC, No. 92-8257, 1993 U.S. App. LEXIS 24458 (11th Cir. 1993).

²⁰ Remand, at 345.

²¹ MFS Intelnet of Illinois, Inc., ICC Docket No. 93-0409; TC Systems of Illinois, Inc., ICC Docket No. 94-0162; MCI Telecommunications Corp., ICC Docket No. 94-0152; In the Matter of Application of City Signal, Inc., MPSC Case No. U-10647.

proceeding.²² A petition seeking the unbundling of switched access is also pending before the Commission.²³

In view of these trends, it is clear that the "fundamental unbundling" of which the Commission spoke in its earlier CI-III proceedings is being driven -- and indeed surpassed -- by the cumulative effects of other regulatory initiatives. No further CI-III effort is required to effectuate unbundling; it is happening already.

VII. STRUCTURAL SEPARATION WOULD INTRODUCE ECONOMIC INEFFICIENCIES INTO THE MARKETPLACE

Attached as Appendix A is an affidavit by a noted economist, David J. Teece. Dr. Teece demonstrates that a return to structural separation is unwarranted and would have adverse economic and customer service consequences. Furthermore, he shows that further regulatory reform is required in order to enable BOCs to fully and effectively respond to the needs of their customers, particularly low volume consumer and small business customers.

In his affidavit, Dr. Teece establishes the economic inefficiency of structural separation and the effectiveness of non-structural safeguards, and concludes that a return to structural separation would be detrimental to the public interest. From an economic perspective structural separation would

²² Expanded Interconnection With Local Telephone Company Facilities, 7 FCC Rcd 7369 (1992), modified as to other issues, 8 FCC Rcd 127 (1992) further modified, FCC 93-379 (released Sept. 2, 1993), vacated in part on other grounds sub nom. Bell Atlantic Telephone Companies, v. FCC, 24 F.3d 1441 (D.C. Cir. 1994).

²³ In the Matter of Unbundling of Local Exchange Carrier Facilities, Petition for Rulemaking

artificially impose significant additional inefficiencies, further impede innovation and prevent BOCs from effectively marketing to and serving customers in the ways they desire. In particular, Dr. Teece shows that structural separation would completely frustrate BOC efforts to perform their natural role of mass marketing enhanced services to low volume/low margin customers.

While structural separation has been effective in facilitating a competitive marketplace and is somewhat less onerous than structural separation, Dr. Teece shows that even today's regulatory regime has stifled growth and innovation in the enhanced services marketplace by handicapping the BOCs' ability to innovate, and to fully and effectively serve their customers. He recommends that with the blurring of distinctions between the technologies used to deliver enhanced services and the emergence of competitive alternatives to the BOCs networks, the Commission should re-examine the non-structural safeguard mechanisms to determine the extent to which they are still necessary to protect the integrity of the competitive process, and to weigh those findings against the economic costs they impose.

VIII. ANSWERS TO SPECIFIC QUESTIONS IN THE NPRM

These comments have addressed most of the specific issues raised in the NPRM. For the convenience of the Commission, Ameritech provides the following summary associating answers or references to sections of these

comments with each specific question or issue for which the Commission is seeking industry comments.

Para. 30- We solicit comment on whether expanded interconnection achieves some of the goals understood as "fundamental unbundling" at the time of the Computer III proceeding.

Expanded interconnection is one of the steps being taken by the industry and policymakers that will assure creation of a "network-of-networks" environment, in which competition can prosper and consumers can exercise freedom of choice not only in services, but also in providers and delivery channels. However, we have already progressed far beyond the benefits afforded by expanded interconnection. This is evident in all the various state and federal regulatory and legislative proceedings addressing more unbundling, and is demonstrated in the unbundling that is actually occurring in states such as Michigan and Illinois, where access is becoming available at loops and switch ports, where interconnection of end offices is underway, where interim number portability solutions are being implemented, all under terms of mutual compensation. And the Ameritech region is not by any means the only area undergoing such drastic change; New York, Maryland and other states, as well as Canada and numerous European and Asian countries are addressing similar opening-up of resources.

Para. 31- We solicit comment on the degree to which the unbundling contemplated in the Intelligent Networks proceeding would provide further protection against access discrimination.

With the industry, including many state policymakers, focused intently on physical unbundling, attempts to address logical unbundling at

this time would be superfluous. The reason is that physical unbundling affords a level of access that allows all interconnectors who so choose to implement their own "logical" platforms to interact with the physical elements of the public switched telecommunications network, and even to avail other providers of access to their platforms. The unbundling contemplated in the Intelligent Network proceeding would provide no further protections against access discrimination than will already be available, but could instead cause LEC deployment of intelligent network functionality to be slowed down appreciably as LECs attempt to redirect their efforts toward artificially mandated constructs.

Para. 35-We solicit comment on 2 issues related to the merits of structural separation. Does the ONA framework as implemented by the BOCs provide sufficient public interest benefits and regulatory safeguards against access discrimination to justify replacing the current service-specific CEI plan regime for BOC enhanced services with full structural relief? We seek comments from parties regarding whether these access discrimination safeguards are adequate to support our moving from a CEI plan regime to one without any structural separation requirements. We also solicit comment on whether any increased risk of access discrimination should lead us to retain the CEI plan filing requirement, or whether a certain amount of increased risk is justified in return for the potential benefits of full structural relief.

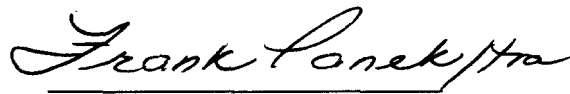
While it was conceived as an effective vehicle for stimulating industry interest in and focus on further unbundling, it is questionable whether the ONA framework today affords sufficient public interest benefits to justify the costs and efforts associated with continuation of the regulatorily-imposed safeguards that accompanied it. The reasons for this are threefold: First, the interactions between LECs and ESPs have been above-board, good faith

pursuit of the goals of ONA. Second, ESPs have chosen to use the so-called "ESP Exemption" to exercise their right to purchase functionality, not from the access tariffs of ONA, but from the exchange tariffs, where they can use business lines for access. Thirdly, the market forces and pricing reform have imposed effective countermeasures to any discriminatory behavior that might have been of concern earlier.

IX. CONCLUSION

For the foregoing reasons, the Commission should continue its refinement of the non-structural safeguards regime which it has fashioned over the past five years. The Commission should also recognize and dismiss out of hand the urgings of those who would reimpose the artificial competitive handicapping scheme which structural separation represents, and which the U.S. telecommunications marketplace has long since outgrown.

Respectfully submitted,

A handwritten signature in cursive script, reading "Frank Panek", with a horizontal line underneath.

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Dated: April 7, 1995

Affidavit of David J. Teece

I. Introduction

My name is David J. Teece. I am Mitsubishi Bank Professor, Haas School of Business, and Director, Institute for Management, Innovation and Organization, University of California at Berkeley. I have been a full professor at Berkeley since 1982. Prior to that, I was Assistant and then Associate Professor of Business Economics at the Graduate School of Business, Stanford University. I received my Ph.D. in Economics from the University of Pennsylvania in 1975. As an industrial organization economist, I have studied the economics of technological change and related public policy and business strategy issues for over two decades. At U.C. Berkeley, I was the Co-founder of the Management of Technology Program, a joint program between the School of Business and College of Engineering, and the Consortium on Competitiveness and Cooperation, a multi-campus research program linking scholars at Berkeley, Stanford, Columbia, Harvard and Wharton who have deep and enduring interests in the long-run performance of the U.S. in the global economy.

My research has been centrally concerned with the relationship between the structure of firms (especially the scope of their activities) and their performance, particularly the capacity to develop and introduce new technologies. I have had a special interest in innovation, organizational structure and antitrust. Relevant books include Antitrust, Innovation, and Competitiveness (1992, with T. Jorde) and The Competitive Challenge (1987). Relevant articles include "Economies of Scope and the Scope of the Enterprise," Journal of Economic Behavior and Organization, Vol. 1, No. 3 (1980); "Towards an Economic Theory of the Multiproduct Firm," Journal of Economic Behavior and Organization, Vol. 3 (1982); and "Telecommunications in Transition: Unbundling, Reintegration and Competition,"

Michigan Telecommunications and Technology Law Review (1995). I have recently submitted two papers to the Federal Communications Commission in support of Ameritech's Customers First Plan ("the Plan"). I also submitted testimony on behalf of AT&T in U.S. v. AT&T. My credentials are more fully outlined on my curriculum vita, Attachment B.

This document addresses the issues raised by the FCC in response to the partial remand by the Court of Appeals of the Commission's order implementing CI-III non-structural safeguards, instead of structural constraints on the BOCs' provision of enhanced services. I address the economic inefficiency of structural separation, the efficacy of structural safeguards, and explain why structural constraints are detrimental to the public interest. I point out that they artificially impose boundaries, impede innovation, and prevent marketing activities that consumers want. With rapid technological change blurring the distinctions amongst the communications, information, and entertainment industries, structural separation would be anachronistic and harmful. In fact, while non-structural safeguards have been effective in facilitating a competitive marketplace, they have nonetheless stifled growth and innovation by handicapping the BOCs' ability to innovate and fully serve customers. The impact of these handicaps has been particularly severe on the BOCs' ability to mass market enhanced services to residential and small business customers. I point out that rather than considering the reimposition of structural separation, the Commission should be examining further regulatory reforms that will enable the BOCs to more effectively and efficiently participate in enhanced services and address customer needs.

II. Basic and Enhanced Services Share Economies of Scope

Scope economies are said to exist if the physical or human capital employed in one activity has sufficient excess capacity (at optimal utilization levels), and sufficient flexibility, that it can be used in the service of other activities as well. The technology of basic telephony and enhanced information services is characterized by economies of scope, which derive from the fact that the existing network of access lines, and switching software and hardware, cannot only be employed in the provision of basic telephone service, but may serve as a component of enhanced services as well.

It is this fact that engenders the public policy question at issue here. Given that the BOCs own some of the means of providing enhanced services, and given that competition is desirable in the provision of enhanced services, the extent to which the BOCs themselves can use their own facilities for use in their enhanced service provision has been made an issue. A proper analysis of the economies at work requires a clear understanding of the role of scope economies in defining firm structures which are efficient and which are able to support development and marketing of innovative services.

Organizational economists recognize a distinction between technological economies of scope and organizational ones. The issue is as follows. Technological economies of scope (TES) imply that the fixed assets generating the economies should, to maximize social efficiency, be employed in all activities for which their capacity can provide positive value. In the instant case, this merely dictates that the existing capacity owned by the BOCs should serve the double duty of transmitting both basic telephone and enhanced information service. It would be socially wasteful for the existing equipment and facilities to be duplicated in order for enhanced services to be provided.

The existence of TES does not necessarily imply, however, that the different uses for the existing capacity must be housed in the same organization. In many cases in which technological scope

economies exist, market transactions and contracts suffice to coordinate several activities, directed by different firms, that employ some common human or physical capital. Airports are an excellent example of an asset employed jointly, via contractual arrangements, by many airlines each producing differentiated services. In such cases, the existence of TES neither prescribes as a matter of public policy, nor predicts as a condition of profit maximization, that a single organization shall offer the several products that utilize the common capacity.

Often, however, the specific nature of the assets is such that division of functions among several firms does not provide the most efficient means of coordinating their different uses. The market may even impede the full realization of the social benefits from the potential economies. This is likely to occur, for example, when the value of the scope economies is only fully realized via frequent transfer of proprietary information, such as for the purpose of developing new applications of existing technology. In such circumstances, internalizing the requisite flow of information and expertise within the boundaries of a single organization reduces the necessity of repeated negotiations, aligns the incentives of the parties under common management, and minimizes the risks of opportunistic behavior.

When the market fails to coordinate the different activities efficiently, the activities should, in the interest of social welfare, be coordinated within a single organization. This is a proposition I explain in more detail in my academic research cited earlier. If the technological economies of scope are most efficiently exploited when the different uses of the assets are managed within the same organization, then there are organizational economies of scope (OES).

These effects can be seen in many contexts. Consider, for instance, the diversification of petroleum producers into alternative fuels. Locating alternative fuel sources uses similar geophysical expertise and techniques as those used in petroleum exploration. Petroleum extraction techniques can often be applied directly to the recovery of geothermal energy and other fuels. Expertise in conventional petroleum refining technology is directly applicable to coal conservation and shale oil recovery. Moreover, successful development of alternative fuels requires continuous flow of proprietary know-how to the specialized applications. Under these conditions, one would expect innovation to proceed most quickly and efficiently in an integrated setting, and it is therefore not surprising that this organizational form has emerged in that industry. Petroleum companies transferred resources back and forth between and amongst divisions that developed different energy resources. Erecting artificial boundaries amongst the relevant organizational subunits would have posed unnecessary costs, and slowed resource development.

The benefits of integration for promoting innovation are quite evident in the telecommunications industry, which has experienced a recent spate of mergers among long distance, cellular, and cable service providers, including such combinations as AT&T and McCaw and British Telecom and MCI. As technologies for previously distinct communications services converge, firms compete to bring new services to customers as quickly as possible. In such a vigorously competitive market, success requires the utmost responsiveness to meeting the customers' demands. Among all the organizational forms the parties could have chosen, such as arms-length contractual arrangements or other market-mediated transactions as well as integration, the marketplace has shown that organizational integration provides the most fertile environment for meeting these goals.